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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,088	07/26/2001	Alessandro Lambiase	36226/125733	6075

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EXAMINER	
VANIK, DAVID L	
ART UNIT	PAPER NUMBER
1615	

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/890,088	LAMBIASE, ALESSANDRO
	Examiner	Art Unit
	David L. Vanik	1615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 13-36 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 13-36 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7-20-01
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Receipt is acknowledged of the Applicant's Arguments filed on 7/2/2004. It should be noted that this case has been transferred from examiner Liliana Di Nola Baron to examiner David Vanik.

As a result of Applicant's amendment, the *35 USC §112* rejection is hereby **withdrawn**. The *35 USC §103* rejections of Claims 13-36 over Louis et al (US 5,641,750), Glaser et al (US 5,767,079), and Yan et al (US 5,641,749) are hereby **withdrawn**.

NEW REJECTIONS:

The following are cited as new rejections:

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Independent claims 13, 21, and 25 as well as dependent claims 14-20, 22-24, and 26-36 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for treating pathology affecting the internal eye, does not reasonably provide enablement for a method of preventing pathology affecting the

internal eye. According to the dictionary, "prophylaxis" is synonymous with the prevention of a disease. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

Enablement is considered in view of the Wands factors (MPEP 2164.01 (a)). These include: (1) breadth of the claims; (2) nature of the invention; (3) state of the prior art; (4) amount of direction provided by the inventor; (5) the level of predictability in the art; (6) the existence of working examples; (7) quantity of experimentation needed to make or use the invention based on the content of the disclosure; and (8) relative skill in the art. All of the factors have been considered with regard to the claim, with the most relevant factors discussed below:

1) The breadth of claims: claims 13-36 are directed to a method of preventing pathology affecting the internal eye. This is a very broad claim, one that is not supported by the instant specification.

2) The nature of the invention: The invention is drawn to a method of treating pathology affecting the internal eye. The rejected claims, however, the claims are directed to a method of preventing pathology affecting the internal eye.

3) The state of the prior art: The state of the art is very high in terms of methods of treating pathology affecting the eye (see US patent 5,641,750 and US patent 6,063,757). Although US patent 5,641,750 and US patent 6,063,757 disclose methods of treating the pathology affecting the internal eye, there is no evidence in the prior art

that the it is possible to prevent internal eye pathologies such as sclera and ciliary bodies. In short, the art recognizes the therapeutic treatment of the eye internal structures, not the prevention of internal eye pathologies.

4) The amount of direction provided by the inventor: There is nothing in the specification that would indicate that the current invention prevents internal eye pathologies. The prevention of internal eye pathologies is a very broad claim. Guidance for treating pathology associated with the internal eye is provided in the specification. Although it is possible to treat pathology associated with the internal eye using nerve growth factor, there is nothing in the specification that the current invention prevents internal eye pathologies. Consequently, a burdensome amount of research would be required by one of ordinary skill in the art to bridge this gap.

5) Predictability of the art: Although US patent 5,641,750 and US patent disclose methods of treating the pathology affecting the internal eye, there is no evidence in the prior art that the it is possible to prevent internal eye pathologies such as sclera and ciliary bodies. In short, the art recognizes the therapeutic treatment of the eye internal structures, not the prevention of internal eye pathologies.

6) The presence or absence of working examples: None of applicant's examples are directed to a method of preventing pathology affecting the internal eye. Rather, consistent with the specification, the examples teach the therapeutic treatment of the eye internal structures. As disclosed by applicant, parameters such as blood flow and contrast sensitivity generally improved with treatment (see page 26 in the instant specification). There is a large gap between treatment and prevention, however. As

such, the practitioner would turn to trial and error experimentation to develop a method of preventing pathology affecting the internal eye, without guidance from the specification or the prior art.

7) The quantity of experimentation: In the instant case, there is a substantial gap between treatment and prevention. Consequently, a burdensome amount of research would be required by one of ordinary skill in the art to bridge this gap. In order to utilize the method as claimed, the skilled artisan would be presented with an unpredictable amount of experimentation. The factors are not sufficiently discussed in the specification to provide guidance to utilize the invention as claimed.

8) The relative skill of those in the art: the skill of one of ordinary skill in the art is very high, e.g., Ph.D. and M.D. level technology.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Independent claims 13 and 21 and dependent claims 14-20 and 22-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 13 is drawn to a method for treating a pathology affecting the internal

tissues of the eye "excluding the pathologies affecting the optic nerve." Like the instant Claim 13, Claim 21 proposes a method for the treatment of the eye "excluding" a mechanistic pathway. Specifically, Claim 21 is drawn to a method for treating a pathology affecting the internal tissues of the eye "excluding retinal pathologies and pathologies affecting the optic nerve." There is no support for the phrase "excluding the pathologies affecting the optic nerve" or "excluding retinal pathologies and pathologies affecting the optic nerve" in the instant specification. Moreover, there is no mention of a method of treating the eye "excluding" a mechanistic pathway in the instant specification. As such, the disclosure of the instant specification is not sufficient to support the concept of "excluding the pathologies affecting the optic nerve" or "excluding retinal pathologies and pathologies affecting the optic nerve." On this basis, the examiner is construing instant Claims 13 and 21 as including any method of treating a pathology affecting the internal tissues of an eye comprising administering nerve growth factor to a subject.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Independent claims 13 and 21 and dependent claims 14-20 and 22-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written

description requirement. The claim(s) contains subject matter, which is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 13-20 are drawn to a method for the treatment or prophylaxis of a pathology affecting the internal tissues of an eye, excluding the pathologies affecting the optic nerve, comprising the administration of a nerve growth factor to a subject. Claims 21-24 are drawn to a method for the treatment or prophylaxis of a pathology affecting the internal tissues of an eye, excluding retinal pathologies and pathologies affecting the optic nerve, comprising the administration of a nerve growth factor to a subject. The language "excluding the pathologies affecting the optic nerve" and "excluding retinal pathologies and pathologies affecting the optic nerve" is not specifically enumerated in the instant specification. By using the language "excluding the pathologies affecting the optic nerve" and "excluding retinal pathologies and pathologies affecting the optic nerve," the applicant has failed to distinctly point out what the invention includes. Rather, in claims 13 and 21, applicant has claimed what the invention excludes. As such, the disclosure of the instant specification is not sufficient to support the concept of "excluding the pathologies affecting the optic nerve" and "excluding retinal pathologies and pathologies affecting the optic nerve."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-36 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 98/48002 ('002).

'002 disclose methods of treating pathologies affecting the internal tissues of the eye by administering between 10 to 500 μg/ml of nerve growth factor to an individual (abstract and page 12, lines 14). The NGF can be administered either topically or over the ocular surface of an individual and treats corneal and/or conjunctival affects (page 12, line 31 – page 13, line 23). In another embodiment, the NGF may be administered by introduction into the anterior chamber of the eye (page 12, lines 17-20). Like the instant application, the NGF may be in the form of an ophthalmic solution or gel and may be administered via a bandage or medical contact lens (page 12, lines 10-13). The NGF medicament can be of human origin and can be used to treat disorders originating from laser treatment (Claim 9, 15).

It is the examiner's position that, inherently, the composition advanced by '002, when injected into the eye, treats the same eye-related disorders as the instant application. Since the essential elements of the '002 composition and method are identical to the instant compositions and methods (that is, injecting a composition comprising 10 to 500 μg/ml of nerve growth factor to an individual), the composition would inherently treat the same disorders as the compositions set forth in the instant

application. As such, it is the examiner's position that the composition advanced by '002 anticipates the compositions enumerated in the instant claim set.

Claims 13-16, 18-19, 21-22, 24-28, 30-36 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0312208 ('208).

'208 disclose aqueous gel formulations comprising 1 to 500 μg/ml of a polypeptide growth factor, such as nerve growth factor (abstract and page 3, lines 25-48). Said nerve growth factor can be used for wound healing in the anterior chamber of the eye (abstract). Said wound healing composition can be delivered to an individual via a bandage (page 2, lines 49-50).

It is the examiner's position that, inherently, the composition advanced by '208, when injected into the eye, treats the same eye-related disorders as he instant application. Since the essential elements of the '208 composition and method are identical to the instant compositions and methods (that is, injecting a composition comprising 1 to 500 μg/ml of nerve growth factor to an individual), the composition would inherently treat the same disorders as the compositions set forth in the instant application. As such, it is the examiner's position that the composition advanced by '208 anticipates the compositions enumerated in the instant claim set.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 6,063,757 is cited as patents of interest in its

disclosure of NGF for use in ophthalmic wound healing. Unlike the instant application, US Patent 6,063,757 uses a maximum of 1000 ng/ml (1μg/ml) in the formulation.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Vanik whose telephone number is (571) 272-3104. The examiner can normally be reached on Monday-Friday 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Vanik
Art Unit 1615

9/2/05

THURMAN K. PAGE
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